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**MEUWISSEN, Patrick, P., E.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **PETERS, Harm, J., A., M.** [NL/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL). **PESET LLOPIS, Rafael** [ES/NL]; c/o Prof. Holstlaan 6, NL-5656 AA Eindhoven (NL).

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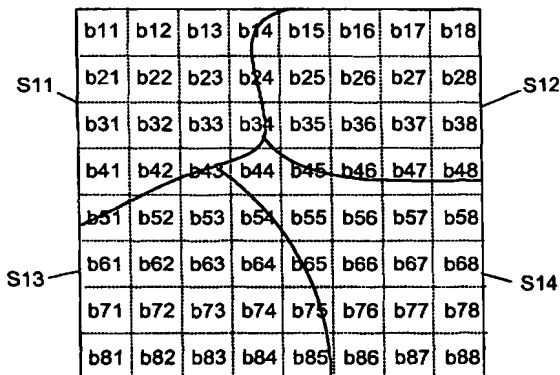
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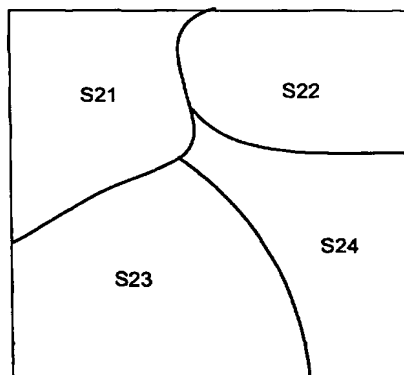
[Continued on next page]

(54) Title: SEGMENT-BASED MOTION ESTIMATION

100



102



(57) Abstract: A method to determine motion vectors for respective segments (S11-S14) of a segmented image (100) comprises: creating sets of candidate motion vectors for the respective segments (S11-S14); dividing the segmented image (100) into a grid of blocks (b11-b88) of pixels; determining for the blocks (b11-b88) of pixels which of the candidate motion vectors belong to the blocks (b11-b88), on basis of the segments (S11-S14) and the locations of the blocks (b11-b88) within the segmented image (100); computing partial match errors for the blocks (b11-b88) on basis of the determined candidate motion vectors and on basis of pixel values of a further image (102); combining the partial match errors into a number of match errors per segment; selecting for each of the sets of candidate motion vectors respective candidate motion vectors on basis of the match errors; and assigning the selected candidate motion vectors as the motion vectors for the respective segments (S11-S14).

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**Declaration under Rule 4.17:**

- as to applicant's entitlement to apply for and be granted a patent (Rule 4.17(ii)) for the following designations AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, UZ, VC, VN, YU, ZA, ZM, ZW, ARIPO patent (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian patent (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European patent (AT, BE, BG, CH, CY, CZ, DE, DK,

EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI patent (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG)

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## INTERNATIONAL SEARCH REPORT

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A. CLASSIFICATION OF SUBJECT MATTER  
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According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC 7 G06T H04N

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practical, search terms used)

EPO-Internal, WPI Data, PAJ, INSPEC, IBM-TDB

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category *	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
A	US 6 304 602 B1 (YOKOYAMA YUTAKA) 16 October 2001 (2001-10-16) abstract	1,8
A	WO 02/093488 A (KONINKL PHILIPS ELECTRONICS NV) 21 November 2002 (2002-11-21) page 7, line 32 - page 8, line 10 ----- -/--	1,8

☒ Further documents are listed in the continuation of box C.☒ Patent family members are listed in annex.

## \* Special categories of cited documents:

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## C.(Continuation) DOCUMENTS CONSIDERED TO BE RELEVANT

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A	AMER A ET AL: "Object-based postprocessing of block motion fields for video applications" PROC. SPIE - INT. SOC. OPT. ENG. (USA), PROCEEDINGS OF THE SPIE - THE INTERNATIONAL SOCIETY FOR OPTICAL ENGINEERING, 2000, SPIE-INT. SOC. OPT. ENG, USA, vol. 3974, 2000, pages 415-424, XP002289572 ISSN: 0277-786X page 421, paragraph 3 - page 422, paragraph 3.3	1,8
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Information on patent family members

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PCT/IB 03/05474

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